

Observation Services

Vision

To set policy, develop procedures, and articulate requirements for the maintenance and enhancement of in-situ and remote environmental monitoring.

Concept of Operations

The Cooperative Observer Network (COOP) and the radiosonde network are being modernized. Activities include replacing the current 91-station upper air network and enhancing 8,000 cooperative observing stations over the remainder of the decade.

As part of a demonstration pilot in New England, about 400 COOP stations are scheduled to be modernized. Modernizing NWS-sponsored observing programs involves integrating new technologies and science, while building stronger relationships with NOAA's public and private sector partners.

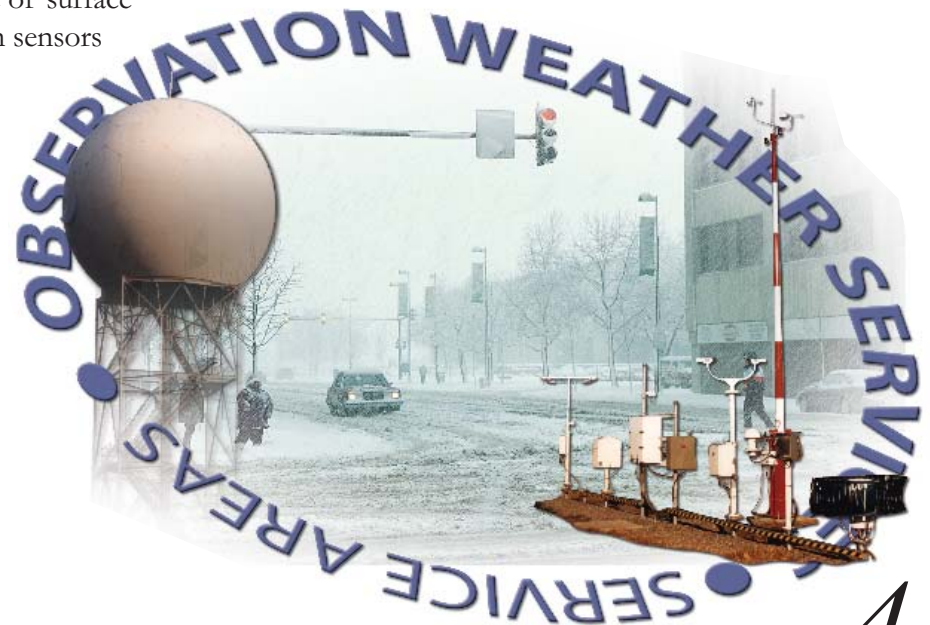
Customer and Partner Requirements

- ✓ Real-time access to ASOS data and COOP data.
- ✓ Access to mesonet data.
- ✓ Access to high-resolution data.

Link to Science and Technology Infusion Plan

The future for Observing Services includes:

- ✓ AQ sensors
- ✓ Boundary layer profilers
- ✓ Advancements in communications
- ✓ More detailed aircraft meteorological reports
- ✓ Increased capacity of satellite reports
- ✓ Use of GPS
- ✓ Improved GPS radiosonde measurements
- ✓ Improved use of surface transportation sensors



Science and Technology Requirements

- ✓ Continue data assimilation.
- ✓ Generate ocean atmosphere model resolution and mesoscale physics.
- ✓ Couple mesoscale ocean and atmospheric Numerical Weather Prediction (NWP) models.
- ✓ Expand targeted observations.
- ✓ Produce high-resolution modeling at the land surface.



Climate Reference Network station in New England utilizes the same sensors as COOP modernization stations.

Milestones by Quarter

1st Quarter

- Deploy 20 radiosonde replacement systems.
- Begin planning for the next phase of COOP deployments.
- Prepare a white paper defining training needs for the legacy and modernized COOP networks.
- Implement the new COOP Length of Service award process.
- Implement new snow-paid observers.
- Complete Memorandum of Agreement with FAA on transition of aviation weather observing support activities.

2nd Quarter

- Finalize Global Climate Observing System (GCOS) metadata for NWS upper air network stations.
- Revise GCOS Global Upper Air Network (GUAN) sites and CLIMAT data implementation.
- Reestablish National COOP newsletter.
- Develop training materials on Fischer & Porter upgrade.

3rd Quarter

- Review the status of on going ASOS sensor continuity evaluations and prepare a report in coordination with NOAA's National Climate Data Center (NCDC).

4th Quarter

- Begin developing a series of training videos for COOP observers.
- Begin the Fischer & Porter continuity evaluation.

Integrated Requirements

- ✓ Graphic user interface in OB2.
- ✓ Local Data Acquisition and Dissemination (LDAD) capability to ingest mesonet data.

Data Assimilation

- ✓ Work with FSL to provide data collection capabilities.
- ✓ Provide improved interim data assimilation for COOP data.
- ✓ Secure National support for the Central Region Weather Coder II (WxCoder II) and Southern Region Interactive Voice Remote Observation Collection (IV-ROCS) system data assimilation solutions.

Outreach

- ✓ Participate in WMO Open Programme Area Groups (OPAG) for International Organizing Committee on Radiosonde Comparisons.
- ✓ Attend WMO International Radiosonde Comparison in Mauritius.
- ✓ Participate in May 2005 Commission for Instrument and Methods of Observation (CIMO) in Bucharest, Romania.
- ✓ Monitor radiosonde testing on regional and national levels and report to the WMO Technical Conference on Meteorological and Environmental Instruments and Methods of Observation (TECO).
- ✓ Develop procedures for the publication of results of WMO intercomparisons for inclusion in chapter 5 of the CIMO guide.
- ✓ Develop performance measures to demonstrate continuous improvement of data quality of radiosonde observations.

Verification

- ✓ Coordinate the process of using COOP data sites for temperature forecast verification.

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